Economic Theory, Decision Theory and Experimental Economics Seminar

A Theory of Income Taxation Under Multidimensional Skill Heterogeneity

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Abstract

We develop a unifying framework for optimal income taxation in multi-sector economies with general patterns of externalities. Agents in this model are characterized by an N-dimensional skill vector corresponding to intrinsic abilities in N potentially externality-causing activities. The private return to each activity depends on individual skill and the aggregate return, which is a fully general function of the economywide distribution of activity-specific efforts. We show that the N-dimensional heterogeneity can be collapsed to a one-dimensional, endogenous statistic sufficient for screening. The optimal tax schedule features a multiplicative income-specific correction to an otherwise standard tax formula. Because externalities change the relative returns to different activities, corrective taxes induce changes in the across-activity allocation of effort. These relative return effects cause the optimal correction to diverge, in general, from the Pigouvian tax that would align private and social returns.
We characterize this divergence and its implications for the shape of the tax schedule both generally and in a number of applications, including externality-free economies, increasing and decreasing returns to scale, zero-sum activities such as bargaining or rent extraction, and positive or negative spillovers.